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LATIN AMERICAN AND ASIAN DEVELOPMENT PATTERNS: A CONTRASTING PROFILE OF HISTORICAL LEGACIES AND CONTEMPORARY PATHS OF CHANGE IN AGRICULTURE

BY

DOUGLAS H. GRAHAM
THE OHIO STATE UNIVERSITY

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I. Introduction

I greatly appreciate the honor of offering a paper in this series on the agricultural problems of Brazil here at Piracicaba. I am sure that you have had the opportunity to hear many Brazilian experts throughout your years here discuss the numerous problems and challenges facing Brazilian agriculture. And, at the same time, I know you have benefited from the insights and knowledge of your fine faculty here at ESALQ. In light of this formidable competition, I have not chosen to talk about the problems of Brazilian agriculture, at least not directly. Rather I have chosen to introduce what I hope will be a different perspective in evaluating the performance of your country's agriculture. This perspective will emphasize Latin American agricultural performance (in which Brazil's role and profile is obviously important) in contrast to that of selected Asian countries.

My reasons for doing this are three-fold. First, I am presuming that Asian agricultural development has not received much emphasis here at ESALQ and I feel its lessons are relevant for professionals concerned with agricultural development; second, the topic has grown out of my own recent experience in teaching material on agricultural development patterns at OSU and engaging in research and field experience in both regions; and thirdly, the more I read the literature on agricultural development in our profession, the more apparent it becomes that the literature has been strongly imprinted by the patterns of development in these two sharply contrasting regions of the world.

This paper is very preliminary and exploratory. As such detailed references and footnotes have been postponed in this version. I shall work these out in greater detail in a later version. However, I will gladly share some of these references with you following this talk if there is any strong interest to do so. I have taken the liberty of presenting this material, perhaps prematurely, in hopes of eliciting critical comments from you and your colleagues in Brazil as to how it might be expanded and improved.

Prior to beginning our discussion, a word is in order on the countries chosen and the tabular material presented. I have chosen the major countries in South American plus Mexico as the basis for this preliminary discussion. In Asia I have limited my country choices to the two major success stories in East Asia (Korea and Taiwan), the four rapidly growing countries in Southeast Asia (Malaysia, Thailand, Indonesia and the Philippines) and the four extremely low income countries of South

Asia (Sri Lanka, Pakistan, India and Bangladesh) for which there are no comparable counterparts in Latin America. I have deliberately excluded the city states of Hong Kong and Singapore as inappropriate for a paper dealing with agriculture. This gives us ten countries in each region, a useful comparable benchmark at this preliminary stage of the analysis. Furthermore, the choice of these countries is defensible in that agricultural development patterns in these countries have influenced the literature on agricultural development in our profession .

Finally, I have condensed the relevant empirical data into six tables. To ensure consistent cross-country comparisons, the World Development Reports of the World Bank have been used as the principal source of information. A number of these tables present material in other sectors of the economy besides agriculture. I find this essential since one cannot evaluate the recent development of agriculture in these two areas without reference to policies and performance in other parts of the economy. Later versions of this work will explore additional agricultural benchmark data.

II. Asian and Latin American Agricultural Development: Setting the Initial Historical Parameters

As stated above the accumulated knowledge on agricultural development has been decisively influenced by historical experiences in Latin America and Asia. Africa, though of growing importance, has yet to shape our thinking (and our texts) as decisively as these other two regions. No doubt this will occur in the decade of the nineties as the current challenges to break through the obstacles to development in Africa are better documented and various lessons set forth in the literature.

For the present, however, the Asian and Latin American experiences predominate in the established literature of the sixties, the seventies and early 1980s. This paper presumes to generalize from the experiences in these two distinctly different parts of the world. First, generalizations are drawn from their sharply different historical legacies. Next, the structural contrasts and recent economic performance are underscored for both the agricultural sector and the economy as a whole in both regions and the consequent differences in the political economy of agricultural policies considered. Finally, the impact upon the agricultural economics literature is identified and discussed as each region's contribution to the recent intellectual legacy of our profession is explored.

Nothing so marks the history of these two regions as their experience in world markets in the 19th and early 20th centuries. Latin America as a region, was overwhelmingly drawn into the rapidly growing currents of world trade at this time, Asian

countries much less so. Moreover, this expansive trade role in Latin America transformed their agricultural sectors from relatively traditional activities into large commercial establishments built on ever growing consolidated land holdings run either as plantations (for cacao, cocoa, coffee and sugar enterprises) or large farms (for cereals and livestock). Pockets of large scale agriculture also appeared in selected Asian agricultural settings. However, the region as a whole generally maintained its traditional rural social structure and traditional rice culture during this period.

Two other characteristics also stand out in explaining the divergent path of agricultural growth in the two regions: the man-land ratio and the requirements of a rice culture in a monsoon setting. The much more land scarce and densely populated Asian societies, over a prolonged period of time, created a firmly entrenched peasant culture under various functional forms of tenancy. Thus it would have been difficult if not impossible to have dislodged or displaced this peasant culture without incurring unacceptable levels of economic cost and social unrest.

Latin America, on the other hand, had low man-land ratios and a richer endowment of natural resources to justify its rapid participation in world trade patterns. This contrasting resource endowment reinforced the dramatically unequal distribution of land resources derived from colonial times. The net result of this resource base and institutional inequalities was to further marginalize or displace the peasant producers in the areas where they originally predominated (the Andean countries and Mexico).

Finally the profile of dominant crops in the two regions highlights the different historical factors shaping the evolution of agriculture in these two areas of the world. Rice, of course, has always dominated Asian agriculture. The complex ecological basis for rice cultivation stands out in Asia with tightly scheduled farming tasks calibrated to the Monsoon rain calendar. Deep ploughing, fine puddling, seeding preparation, transplanting, reaping, threshing and the need for careful control of water systems with good irrigation and drainage is necessary to ensure success in a disciplined cooperation that is unnecessary for the cultivation of wheat, corn and other grains in Latin American agriculture. The fact that this is the region of the world where farmer organizations and cooperatives are most successful is not by accident. In contrast, farm level cooperatives have a more checkered and problematic record in Latin American settings.

In Latin America, export crops predominate in the economic history of the past one hundred years. While relatively efficient plantations and large farm operations emerged to grow these crops, there was only a limited role for peasant producers in these settings. Thus the rich mosaic of tenancy conditions for peasant cultivators, so common to Asia, was much less developed

in Latin America. In the end, a domestic wage good (rice) shaped the path of agricultural development and the institutional forms of tenancy supporting that development in one area, while non-wage export crops shaped the growth of the other world area and the labor market institutions behind that growth.

This wage-good syndrome stands out in the Asian colonial legacy and deserves a digression here. In playing its colonial role in the early 20th century, Japan helped modernize the rice cultures of Korea and Taiwan. These colonies acted as effective suppliers of cheap wage goods for Japanese urban consumers. The Tokyo rice riots during the First World War underlined the dangerous stagnation of Japanese agriculture at the time and did much to shape this colonial policy. The significance of this policy lies in the long run impact of building irrigation networks, testing and adopting new varieties and practices, and developing farmer associations to facilitate the adoption of these new varieties and practices. In the end a large number of small rice producers in the colonies benefited from the social and economic infrastructure necessary to carry out the colonial objective of feeding the populace of the metropolitan country.

In contrast investment in agriculture in Latin America, stimulated by late 19th and early 20th century trade patterns, ignored wage goods and emphasized non-wage, non-food, agricultural commodities with less significant spillover benefits for small holder producers. Put in contemporary parlance the Japanese colonial legacy, based on a wage good food crop, eventually facilitated a uni-model agricultural development strategy in the post-World War II era in East Asia, while the neo-colonial legacy in Latin America encouraged the emergence of a bi-model minifundia-latifundia development style. The rest of this paper focuses on the post-war development patterns in the two regions highlighting the different evolution of agricultural development, pricing policies, foreign trade and macro-economic policy styles, the role of informal markets, land reform and the political economy of food policy and rent seeking in these different areas of the world.

III. Recent Development Patterns: Asia and Latin America Compared

Table 1 sets forth the basic income and growth profile for the two sets of countries. The Latin American countries clearly register a markedly higher level of income per capita than the Asian countries. In 1976 the Latin American group recorded an average income per capita level 2.6 times that of the Asian group. However, by 1985 this differential had been reduced substantially. Columns 3 and 4 underscore this growth profile emphasizing the stronger performance of the Asian countries. During the decade of the 1960s and early 1970s, the Asian group

TABLE 1
INCOME PER CAPITA RANKINGS AND AVERAGE ANNUAL RATES OF GROWTH
FOR SELECTED ASIAN AND LATIN AMERICAN COUNTRIES
FOR SELECTED PERIODS 1960 - 1985

Ranked by 1985 Inc/Cap	Income per Capita US$		Average Annual Growth of Income Per Capita	
			1960 to	1965 to
	1976	1985	1976	1985
	(1)	(2)	(3)	(4)
Asian Countries				
Taiwan	$1,070	$2,794 (1984)	6.3	6.8
S. Korea	670	2,150	7.3	6.6
Malaysia	860	2,000	3.9	4.4
Thailand	380	800	4.5	4.0
Philippines	410	580	2.4	2.3
Indonesia	240	530	3.4	4.8
Pakistan	170	380	3.1	2.6
Sri Lanka	200	380	2.0	2.9
India	150	270	1.3	1.7
Bangladesh	110	150	-0.4	0.4
AVE	$ 426	$ 804	3.4	3.7
Latin American Countries:				
Venezuela	$2,570	$3,080	2.6	0.5
Argentina	1,550	2,130	2.8	0.2
Mexico	1,090	2,080	3.0	2.7
Uruguay	1,390	1,650	0.6	1.4
Brazil	1,140	1,640	4.8	4.3
Chile	1,050	1,430	0.9	-0.2
Colombia	630	1,320	2.8	2.9
Ecuador	640	1,160	3.6	3.5
Peru	800	1,010	2.6	0.2
Bolivia	390	470	2.3	-0.2
AVE.	$1,093	$1,349	2.7	1.6
(Latin A. Ave/ Asian Ave.)	2.6	1.7		

Source: World Development Report, 1978 and 1987, World Bank, Washington D.C., Table 1.

registered an impressive 3.4 percent rate of growth of per capita income in comparison to the slower 2.7 percent rate of growth for the Latin American countries. If one eliminates South Korea and Taiwan, the resulting 2.5 percent still roughly corresponds to the Latin American growth rate.

This contrast stands out even more strikingly in the more recent period from 1965 to 1985 which highlights the cumulative impact of the post 1973 oil crisis years along with the turbulent years of the world recession in the early 1980s. One should bear in mind that only two Asian countries can be labelled as oil producing countries. (Indonesia, and to a lesser extent, Malaysia) while five Latin American countries (Venezuela, Mexico, Ecuador, Argentina and Peru) are either important oil producers or close to self-sufficiency, thereby presumably relaxing the growth constraints from a high priced oil world. Yet the record of per capita income growth markedly favors the Asian countries (3.7 to 1.6 percent), a differential more marked than that recorded in the period weighted by the 1960s and early 1970s. Even if we exclude the high growth countries of Korea and Taiwan, the Asian group registers a growth rate of income per capita of 2.8 percent per year, substantially above the level recorded by the Latin American group. Thus, throughout the last two decades the Asian group outperforms the Latin American group of countries, particularly for the more recent period, even when one excludes Korea and Taiwan.

Table 2 sets forth the contrasting performance within the agricultural sector. Associated with the much higher income per capita measures, the Latin American countries have a much lower percentage of their labor forces in agriculture. If we take the decline in the share of the labor force in agriculture as a rough index of modernization (column 3), the Asian countries present an unusual mix. The Asian countries stand out in having the two most dramatically modernizing countries in both sets of countries (in Korea and Taiwan where the decline in the agricultural labor force in twenty years reached over 30 percentage points in column 3) as well as the least modernizing such as the South Asian countries where the percentage decline was marginal. On the other hand, the low percentage differences for Argentina and Uruguay emerge because these economies had already modernized in earlier decades (i.e. their labor force shift into the industrial sector occurred earlier).

Given their low levels of per-capita income, the higher shares of their labor force in agriculture, and a generally traditional peasant culture in place to cultivate their dominant wage-good crop (i.e. rice), the Asian countries could not promote the higher rates of economic growth seen in Table 1 without including a prominent role for modernization within their agricultural sectors themselves. This becomes evident through investigation of the remaining data in Table 2.

TABLE 2
SELECTED DATA ON STRUCTURE AND PERFORMANCE OF AGRICULTURAL SECTORS FOR SELECTED ASIAN AND LATIN AMERICAN COUNTRIES

Countries Ranked by 1985 Inc/Cap.	Percent of Labor Force In Agriculture			Fertilizer Consumption Hundreds of grams/hectare			Food Product per Capita Base yrs. = 100		Food Imports as a % Total Imports	
							1965-67 to 1974-6	1979-81 to 1983-5		
	1960 (1)	1980 (2)	Diff (3)	1970 (4)	1984 (5)	% Incr. (6)	(7)	(8)	1965 (9)	1985 (10)
A. ASIAN COUNTRIES										
Taiwan	56	20	36	na	na	na	na	na	na	na
S. Korea	66	36	30	2,466	3,311	34.2%	104	109	15	6
Malaysia	63	42	21	436	1,304	199.0	146	116	25	27
Thailand	84	71	13	76	250	229.0	106	119	6	5
Philippines	61	52	9	214	319	49.0	108	103	20	8
Indonesia	75	57	18	119	746	526.8	117	117	6	6
Pakistan	61	55	6	168	594	253.5	114	114	20	19
Sri Lanka	56	53	3	496	767	54.6	110	98	41	15
India	74	70	4	114	394	245.6	107	120	22	13
Bangladesh	87	75	12	142	611	330.3	95	110	-	24
AVE.	68	53		470	921		112	112	19.3	11.8
AVE. (w/o Korea)				(220)	(623)					
B. LATIN AMERICAN COUNTRIES										
Venezuela	35	16	19	165	411	149.0	113	101	12	19
Argentina	20	13	7	24	37	54.2	104	106	6	4
Mexico	55	37	18	246	602	144.7	98	110	5	17
Uruguay	21	16	5	392	292	-25.5	110	107	7	8
Brazil	52	31	21	169	304	79.8	114	115	20	9
Chile	30	17	13	317	249	-21.4	92	103	20	18
Colombia	51	34	17	310	558	80.0	106	103	8	10
Ecuador	57	39	18	123	297	141.4	97	104	10	10
Peru	53	40	13	297	224	-24.5	99	111	17	25
Bolivia	61	46	15	13	25	92.3	119	101	19	23
AVE.	43	29		205	299		105	106	12.4	14.3

Source: World Development Report, 1987, World Bank, Tables 6, 12 and 32; World Development Report 1983, Table 21; World Development Report, 1978, Table 1

The modernization drive within agriculture in the Asian group can be seen in the substantially higher growth in the consumption of fertilizer per hectare than that recorded for the Latin American group. Whereas the differential average consumption was roughly 2.3 times higher in 1970 for the Asian group over the Latin American group (column 4 averages), this rose to a multiple 3.1 times higher in 1984 (column 5 averages). Thus the decade of the 1970s and the early 1980s saw a faster pace of agricultural modernization (measured in terms of increased fertilizer consumption) in the Asian group of nations.

This finding is not unexpected for a resource poor region with a high man-land ratio. In short this measure of modernization (i.e. fertilizer per hectare) is biased in favor of land-scarce countries. If one were to use an output per worker measure of modernization (i.e. mechanization), the Latin American countries would clearly stand out as having modernized much more rapidly than the Asian group. However, the former measure is relevant for a more uni-model structure of land holdings and underscores the potential for a wider distribution of the benefits of modernization. It is precisely for this reason that I have chosen to report this data since the uni-model vs. bi-model development path is the relevant frame of reference in any comparison of land-surplus Latin America with land-scarce Asia.

The remaining data in Table 2 highlight the fact that the Asian path to agricultural modernization led to a higher growth of food production per capita in the 1970s and the 1980s (columns 7 and 8). This increased production also led to a marked reduction in food imports or greater food self sufficiency (columns 9 and 10) than that recorded for the Latin American group which recorded an increase in food import dependency from 1965 to 1985.

To draw this tabular analysis to a close, four additional tables have been assembled to offer insights into the general policy making scenario within the two sets of countries. These tables also present further evidence on the equity dimensions of growth within each group of countries. The findings in tables 3 and 4 underline the contrasts in the relative role of the financial sectors in the process of recent economic growth in the two regions. First table 3 shows that inflation was much higher in the Latin American group than in the Asian countries. Moreover, this dramatic contrast has grown even more markedly in the more recent period of the 1980s (column 2). High rates of inflation destroy the effectiveness of the financial system and financial intermediation as a major contributor to efficient resource allocation and economic growth. The much higher and growing levels of financial deepening in the Asian group underscores the greater relative role of their financial sectors in their growth process.

TABLE 3
RATES OF INFLATION AND FINANCIAL DEEPENING FOR
SELECTED COUNTRIES IN ASIA AND LATIN AMERICA
FOR SELECTED YEARS 1965-1985

Countries Ranked by Inc/Cap 1985	Average Annual Inflation		Financial Deepening (M_3/GDP)		
A. Asia Countries	1965-80 (1)	1980-85 (2)	1965 (3)	1980 (4)	1985 (5)
Taiwan			33	64	111.0
S Korea	18.7	6.0	11.1	31.8	40.0
Malaysia	4.9	3.1	26.3	69.5	104.5
Thailand	6.8	3.2	25.6	35.9	58.9
Philippines	11.8	19.3	19.9	19.0	19.2
Indonesia	34.3	10.7	-	13.7	22.7
Pakistan	10.2	8.1	40.8	38.2	37.6
Sri Lanka	9.5	14.7	31.4	32.9	35.6
India	7.4	7.3	25.7	38.4	44.3
Bangladesh	14.9	11.5	-	18.6	25.7
AVE.	13.2	9.3	25.8	33.1	43.1
B. LATIN AMERICAN CO'S					
Venezuela	8.7	9.2	20.5	42.6	65.4
Argentina	78.5	342.8	-	22.2	12.7
Mexico	13.2	62.2	27.0	28.3	26.6
Uruguay	57.7	44.6	28.6	30.5	38.3
Brazil	31.6	147.7	20.8	17.3	21.8
Chile	129.9	19.3	-	17.6	25.6
Colombia	17.5	22.5	19.8	23.7	28.1
Ecuador	11.3	29.7	15.6	20.2	17.8
Peru	20.5	98.6	18.7	16.3	16.4
Bolivia	15.7	569.1	11.8	16.2	6.2
AVE.	38.5	134.5	20.4	23.5	25.9
AVE.(w/o Bolivia Arg. and Brazil)		40.9			

Source: World Development Report 1987, World Bank, Table 18, pp.236-7.

TABLE 4
SELECTED INDICATORS ON LONG TERM DEBT FOR SELECTED
ASIAN AND LATIN AMERICAN COUNTRIES
1970 AND 1985

Countries Ranked by Inc/Cap. 1985		Total Long Term Debt Disbursed and Outstanding as a Percent of GNP		Long Term Debt Service as a Percent of Exports of Goods and Services	
A.	ASIAN CO'S.	1970	1985	1970	1985
		(1)	(2)	(3)	(4)
	Taiwan	1.4	-	4.5	-
	S. Korea	3.2	8.6	20.4	21.5
	Malaysia	10.9	52.0	4.4	27.5
	Thailand	11.1	36.0	14.0	25.4
	Philippines	21.1	52.1	22.8	19.5
	Indonesia	30.0	36.6	-	25.1
	Pakistan	30.8	31.7	23.5	30.0
	Sri Lanka	-	49.2	-	14.7
	India	15.4	15.0	25.1	12.7
	Bangladesh	-	37.2	-	16.7
	AVE.	15.4	36.4	16.4	21.4
B.	LATIN AMERICAN CO'S				
	Venezuela	8.7	46.1	-	-
	Argentina	23.3	56.4	-	-
	Mexico	17.0	52.8	44.3	48.2
	Uruguay	12.5	58.4	23.6	36.5
	Brazil	12.2	43.8	21.8	34.8
	Chile	32.2	123.9	24.4	44.1
	Colombia	22.5	33.3	19.3	33.4
	Ecuador	14.8	61.5	14.0	33.0
	Peru	38.1	74.9	40.0	16.0
	Bolivia	47.3	136.8	-	-
	AVE.	22.8	68.7	26.8	35.1

Source: World Development Report 1987, World Bank, Table 18, pp.236-7.

Finally, high inflation, financial repression and financial shallowing means a country is not making any serious attempt to create incentives to mobilize domestic resources for economic development. This leads to a foreign debt-led pattern of growth, a development style developed par excellance by Latin American countries. Table 4 emphasizes this pattern and, again, the contrast between the Latin American and Asian group of nations stands out. The Latin American countries drew much more heavily upon external debt and are currently struggling with more severe debt-induced stabilization programs. The findings in both Tables 3 and 4 strongly imply that macroeconomic policies in the Asian group (with the exception of the Philippines, a touch of Latin America in Asia) were more consistent and under greater control through time than was the case in the Latin American group of countries.

At the same time, macroeconomic inconsistency and instability is invariably associated with serious distortions in resource allocation. In its 1983 World Development Report, the World Bank staff collected information on price distortions for thirty-one developing countries representing more than 75 percent of the population of the developing world (excluding China). The analysis concentrated on distortions in the prices of foreign exchange, capital (interest rates), labor (wages), trade restrictions (implicit tariffs) and infrastructure services (electricity, etc.). the estimated composite price distortion index was found to be inversely related to growth and efficiency.

Of interest to us is the fact that four out of the six least distorted economies (those with the lowest composite price distortion index) consisted of countries from our Asian group of nations. Moreover, due to the fact that Taiwan was excluded from the study (as it has been excluded from all World Bank statistical tables since its replacement by China in the United Nations), this is an underestimation of the number of our Asian countries in the least distorted group. Taiwan has been notoriously free of major price distortions in its economy in recent decades. Out of the least fifteen distorted countries, seven of our Asian group are included (eight if we choose to include Taiwan). Only one Latin American country (Colombia) is included in this list. On the other hand, seven of the ten countries making up our group of Latin American nations fall into the category of the most price distorted countries in the study (from 16th to 31st place).

Tables 5 and 6 round out this analysis in documenting intersectoral inequality and income distribution. The relative product per worker measures in Table 5 indicate that the sectoral per worker income differentials between industry and agriculture are wider in the Latin American countries in 1960 and 1980. At the same time the relative share of wages in industrial value added, though initially similar in 1970, diverged by the mid

1980's. Thus, the functional distribution of income within the industrial sector (between wage and non-wage income) slightly improved in the Asian subgroup but worsened in the Latin American group of nations over the past decade.

However, it is Table 6 that highlights one of the more meaningful contrasts between these two regions of the world, namely the profile of income distribution. While data does not exist for all countries, the available evidence underscores the much more equitable distribution of income in the Asian countries over that recorded in the Latin American countries. This is evident whether noted through the average percent of household income accruing to the lowest twenty percent of the population (6.1% vs. 2.8%), or through the fact that the richest 10 percent of the households account (on the average) for over 50 percent of total income in the Latin American countries but only 34 percent among the Asian countries. The heavy weight of the wealthiest 20 percent of households can be seen in column 5 where they represent (on the average) twenty times the income share of the poorest 20 percent in the five Latin American countries but only come to eight times the share of the poorest 20 percent in the Asian countries. In brief, income differentials and income inequality are much more marked in Latin America.

The scenario that emerges from this comparison is clear. The Latin American group as a whole record higher levels of income per capita and a much smaller share of their labor force in agriculture. They have gone further through the structural transformation of modern economic growth than most of the Asian group. However, in the post-war period, the rate of growth of income per capita has been substantially higher in the Asian countries, especially for the most recent decades. Moreover, this growth has stimulated an impressive record of broad based agricultural modernization within a relatively stable,non-inflationary environment and with much less foreign debt and much more domestic mobilization of savings. Whereas the Latin American growth path has been characterized by growing macro-economic disequilibria and inequality, the Asian group's development has been much less disequilibrating, built on a firmer base of social consensus, and has distributed its benefits much more widely both within and outside their agricultural sectors. It is precisely this later feature that has shaped the image of the agricultural sector in the two regions, and the way in which it is frequently researched and portrayed within the agricultural economics literature.

IV. Agriculture in Asia and Latin America: Institutional and Policy Biases

Two important institutional developments that go a long way to help characterize the image of agricultural development in

these two contrasting societies, are land reform and agricultural research. Post-war land reform in the Asian countries has been brought about through the aftermath of wars and occupations. Korea and Taiwan carried out their land reforms in the early 1950s. On the other hand, land reform in the Latin American countries under review here (Mexico, Bolivia, Chile, Peru and Colombia) occurred through non-war related political developments as a part of more politicized populist movements. In the Asian countries the land reform was relatively easier and consisted of legitimizing a juridical basis for the small tenant operational units of the peasantry that were already in place and had already become the effective producer units in the country. The Latin American land reforms, in contrast, were far more difficult and politically divisive in that land was actually being redistributed physically to landholders that had not previously been the predominant operational production units in much of the country. The political motivations behind the Asian reforms were in part to secure a firmer socio-economic base for national security in the face of a hostile neighboring power. Equity and distributive justice, while clearly an important political motive in both settings, stands out more clearly as the dominant motive in the Latin American setting. Finally, the post-reform policy era was generally less biased against the agricultural sector in the Asian settings, while in Latin America an urban bias remained strongly entrenched in the pricing and investment policies in the post-reform period.

The path and process of agricultural research and technological change offers an additional revealing contrast in the two settings. Literature on the green revolution is almost exclusively an Asian story. The more dramatic break throughs occurred in Northwest India and the Punjab area of Pakistan. However, other areas in Indonesia, the Philippines, and Malaysia also recorded substantial breakthroughs in rice productivity. Even the East Asian countries of Korea and Taiwan, which had experienced an earlier generation of productivity increases in the 1920s and 1930s, participated in this recent growth in productivity.

While some interregional disparities resulted from this process and capital and land, in relative terms, were rewarded more than labor, it was still a land and labor intensive process, widely adopted by small and medium sized farmers with real incomes growing substantially for these smaller producer classes. To the extent that some income inequalities did remain (or in some cases worsen), this was due to the bias associated with access to credit markets, infrastructural support services, and the original land distribution, and had nothing to do with the nature of the technology itself which was scale-neutral.

The Latin American modernization syndrome emerged along a different path. Here, expansion at the margin through mechaniza-

tion is more marked. Land and labor intensive technology has played a relatively minor role in this process, given the original resource endowment and the bi-model profile of land use. In this case, not only was land distribution and access to infrastructural support services more unequal than in the Asian setting, but the dominant technology (labor saving mechanization) was not scale neutral.

The case of rice is illustrative here. In Asia it is a peasant crop. Thus, yield breakthroughs here benefit this class. For Latin America rice is a larger farmer enterprise and improved yields have benefited this class. For Latin America to have gained the same widely distributed benefits of the yield breakthroughs through research output and technology as the Asian countries, it would have been necessary to have had a scale neutral yield breakthrough in peasant produced crops like corn and beans. These, however were not the crops experiencing significant technological change in Latin American agriculture. Selected export crops, wheat, rice and soybeans stand out and, in most instances, larger farms with capital intensive and/or labor displacing technologies predominate in their production. The implications for the relative distribution of the fruits of technological change are clear.

The third institutional arena in which there is a marked contrast between these two regions is the informal sector. In the Asian countries there has been a long, rich tradition of scholarship on informal markets, non-farm and off-farm income and employment in rural areas, and the ways in which these village level markets are linked through labor, input, credit and product markets. Indeed the non-farm and off-farm employment studies along with the rapidly emerging literature on interlinked markets in peasant economies are reshaping and redefining important conceptual frameworks in agricultural economics. This stands out in areas of tenancy theory, risk, rural finance, interlinked markets, and technological change.

Three important implications emerge from this recent outgrowth of informal market literature in our profession. First it is largely an Asian phenomenon in which Asian scholars have played an important role in redefining the agenda for research. Second, in more recent years, this research has both consciously and unconsciously contributed to a more favorable interpretation of the positive role of informal markets in rural development. The common stereotype of exploitation, so common in the literature of the fifties and sixties, has been replaced (or at the very least heavily qualified) by the new conceptual framework of transaction costs. Even that favorite bad actor, the moneylender and informal credit in general, comes out less uniformly criticized, as the elements of risk, uncertainty, opportunity costs and transaction costs are factored into analysis of informal market transactions. This form of analysis has become increas-

TABLE 5

RELATIVE PRODUCT PER WORKER MEASURES FOR
THE AGRICULTURAL AND INDUSTRIAL SECTOR FOR SELECTED
ASIAN AND LATIN AMERICAN COUNTRIES 1960 and 1980
(Ratio of Sectoral Product Share/Total Mfg. Wages and
Relative Product Per Worker — to Sector Labor Force Share) — Sal. as % Mfg. Value Added

Ranked by 1985 Inc/Cap.	1960 Agr. (1)	1960 Ind (2)	1960 (2/1) (3)	1980 Agr. (4)	1980 Ind. (5)	1980 (5/4) (6)	1970 (7)	1984 (8)
A. Asian Countries								
Taiwan	.58	1.47	2.53	.47	1.07	2 27	na	na
S. Korea	.56	2.22	3.97	.47	1.41	3.00	25	27
Malaysia	.59	1.50	2.54	.48	2.31	4.81	na	na
Thailand	.48	4.75	9.89	.33	3.22	9.75	25	24
Philippines	.43	1.86	4.34	.50	2.17	4.35	21	25
Indonesia	.72	1.75	2.43	.47	2.80	5.96	26	24
Pakistan	.75	.88	1.18	.54	1.25	2.31	21	21
Sri Lanka	.57	1.43	2.50	.52	2.14	4 12	-	27
India	.67	1.82	2.71	.53	2.00	3.77	47	49
Bangladesh	.66	2.33	3.53	.73	1.18	1.61	26	32
			3.56			4.19	27.2	28.8*
B. Latin American Countries								
Venezuela	.17	1.00	5.88	.33	1.74	5.27	31	32
Argentina	.80	1.05	1.32	.69	1.35	1.96	30	21
Mexico	.29	1.45	5.00	.27	1.46	5.41	39	25
Uruguay	.95	.93	98	.90	1.03	1.14	-	20
Brazil	.30	2.33	7.76	.33	1.54	4.67	22	19
Chile	.32	2.55	7.96	.37	1 94	5.26	19	17
Colombia	.66	1.37	2.07	1.07	1.43	1.33	25	20
Ecuador	.51	1.96	3.84	.25	2.23	8.94	27	36
Peru	.35	1.65	4.71	.20	2.50	12.50	-	15
Bolivia	.43	1.39	3.22	.36	1.21	3.35	-	
AVE			4.27			4 98	27.5	24.3*

Sources: Derived from original data in World Development Reports, 1978, 1982, 1983 and 198, World Bank.
Post 1976 data on Taiwan from Taiwan Statistical Data Book, 1986, Republic of China

* The average here is only for countries that have data for both years in columns 7 and 8.

TABLE 6

INCOME DISTRIBUTION INDICATORS FOR SELECTED ASIAN AND LATIN AMERICAN COUNTRIES FOR SELECTED PERIODS IN THE 1970s and 1980s

Ranked by 1985 Inc/Cap	Year of Survey (1)	Percentage share of Household Income: Lowest 20% (2)	Highest 20% (3)	Highest 10% (4)	Ratio of Top 20% to Lowest 20% (5)
A ASIAN COUNTRIES					
Taiwan	1976	8 9	37.3	-	4 1
S Korea	1976	5 7	45.3	27 5	7 9
Malaysia	1973	3 5	50 1	29 ?	? ?
Thailand	1975	5.6	49.8	??	8 9
Philippines	1985	5 2	52.5	37 0	10 1
Indonesia	1976	6 6	49 4	34 0	7 5
Pakistan					
Sri Lanka	1980	5 9	49 8	34.7	8 6
India	1975	7 0	49.4	33.6	7.1
Bangladesh	1981	9 3	45.9	29 5	6 7
AVE		6 1	48 9	33 7	7 5
B LATIN AMERICAN COUNTRIES					
Venezuela	1970	3 0	54.0	35 7	18 0
Argentina	1970	4 4	50 3	35 ?	11 5
Mexico	1977	2 9	57 7	40 6	20 0
Uruguay					
Brazil	1972	2 0	66 6	50 6	33 3
Chile					
Colombia					
Ecuador					
Peru	1972	1 9	61 0	42 9	32
Bolivia					
AVE		2 8	57 8	41 0	20 6

Source: Derived from data in World Development Report, 1987, World Bank, and Taiwan Statistical Data Book, 1986, Republic of China

ingly popular in light of the recent, widespread failure of formal financial institutions to overcome the risk and transaction costs of engaging in credit activity with small peasant producers.

The third implication is the attitude towards market forces and pricing policy in general. The ample research on the peasant economy in the past decade has generated increased respect for the positive role of private markets in resource allocation in rural Asia. Parastatal intervention, while evident, has been less common in Asian settings and, more to the point here, price penalization has been less severe in the Asian than in the Latin American setting.

This price policy bias is the most comprehensive contrast between these two regions and allows us to draw this discussion to a close. As pointed out earlier, Asian countries did not generally turn the internal or domestic terms of trade against their agricultural sectors in any persistent and severe fashion in the post-war period. Latin America frequently did so as a part of their exaggerated import-substitution industrialization policies. This urban bias in trade and pricing policies was further exacerbated through periods of high inflationary finance which further penalized agricultural procedures.

Important here was the image of the agricultural sector which in turn allowed or encouraged these penalizing agricultural policies. The image of an agricultural sector dominated by large producers, allegedly unresponsive to prices or profits is admittedly overdrawn but, nevertheless, in a highly politicized, populist political environment, in Latin America this image frequently prevailed with negative policy consequences for the sector. The "sectoral clash" literature (emphasizing the conflict of interests in pricing policies between the agricultural and the non-agricultural sectors) is largely a Latin American literature (and, more recently, also an African literature). It has never been an important feature of Asian literature. More recently, studies in Latin America on the effective levels of intersectoral protection have been the modern variant in this sectoral clash literature that first surfaced back in the late 1950s and early 1060s.

The principal conclusions that one can draw from these institutional and policy biases is that the agricultural sector has a firmer institutional base in Asia. Moreover, this base has created broad based political support and consensus to support the sector and even protect it through price and investment policies (especially since the 1960s). This is possible because its popular image is one of a peasant-dominated sector, hence, highly penalizing pricing policies are considered inappropriate for reasons of equity as well as efficiency. Moreover, programs of food security in the 1970s promoted heavy state investments in

the sector. The bottom line is that agriculture merits support and protection within the Asian setting. The sector's image and policy treatment is much more problematical in Latin America, depending upon the nature of the regime in power and the degree of macroeconomic instability.

This issue of macro policy instability reflects a greater lack of consensus in the policy of Latin American societies than in Asian societies. Persistent inflation over decades reflects a lack of social and political consensus over an appropriate incomes policy. Governments are unable to control conflicting rent seeking through the instruments of public policy. The result is uncontrolled inflation in which agricultural producers (especially small producers) are at a disadvantage through the impact of inflationary finance on interest rates, the exchange rate and agricultural product prices. Asian producers have generally been spared this constant instability through the more cohesive structure of social harmony within their politics. The firm social base of peasant agriculture in Asia makes an important contribution to that consensus. This in turn permits greater stability of macroeconomic policy making and more even-handed sectoral treatment of agriculture.

V. Conclusions

The patterns of agricultural development in Latin America and Asia have decisively influenced the agricultural economics literature on development. Sharply contrasting historical legacies and post-war development paths have imprinted these distinct regional profiles. This paper traced out the main features of those contrasting legacies and contemporary growth paths. Elements of growth, structural change, agricultural modernization, income distribution and macroeconomic stability were discussed along with the contrasting institutional and policy biases that have grown out of those elements.

In this concluding section it is useful to illustrate how these sharply different development styles have been reflected through development organizations representing their respective regional interests and concerns. Programs promoted by the United Nations regional secretariats (ECAFE for Asia and ECLA or CEPAL for Latin America) and the regional development banks (the Asian Development Bank - ADB and the InterAmerican Development Bank - IDB) highlights these differences.

ECAFE and the ADB have generally operated with a low profile throughout much of the post-war period. The ADB has developed a strong research arm in the recent decade, emphasizing the positive features of informal market performance, domestic savings mobilization and the benefits of financial sector development, agricultural modernization, outward (i.e. export) oriented policies and market prices.

ECLA and the IDB, on the other hand, have always been in the forefront of government intervention to induce inward-oriented import substitution industrialization. At the same time they have generally argued in favor of resource transfers from North to South, minimized the role of domestic savings mobilization and have highlighted the important role of government intervention to break the structural constraints to development. Indeed Latin American scholars and international civil servants from ECLA have been the driving intellectual force behind UNCTAD and the LDC stance on North-South issues generally. They are responsible for the structuralist school in development literature. Asian scholars and civil servants, on the other hand, have been more circumspect on these issues.

These contrasts help explain the comparative advantage of each region in the scholarship on development. Latin American scholars and those working on Latin American development issues have helped redefine the debates on macro policy, monetarism, structuralism and related issues. Asian scholars, while making contributions in these areas, have stood out relatively more in defining the scholarly agenda on peasant economies, informal and interlinked markets and agricultural research and modernization. This in part grows out of the greater relative role of agriculture in their economies and, of equal importance, the instrumental role that their peasant economies have played in shaping institutions, social cohesion, political consensus and relative macro economic stability over time. The agricultural sector and rural society in Latin America have played a far less decisive positive role in shaping the institutions and behavior of modern Latin America